# Documentation Sheet

| National Aerospace Laboratories | *Class* Restricted<br>*No. of copies* 20 |
|---|---|
| *Title* LOW SPEED EXPERIMENTAL STUDY ON A HIGH-LIFT SYSTEM USED FOR LTA | |
| *Author(s)* V. Jayaraman, H.N.V. Dutt | |
| *Division* E.A.D. | *NAL Project No.* ID-8-117K |
| *Document No.* | *Date of issue* December 1993 |
| *Contents* 4 *Pages* 9 *Figures* 2 *Tables* *References* | |
| *External Participation* | |
| *Sponsor* | |
| *Approval* Head, Experimental Aerodynamics Division | |
| *Remarks* | |
| *Keywords* Wind Tunnel Testing -Two element airfoil - surface pressure distribution | |


*Abstract*

Low speed wind tunnel tests have been carried out on a two-component airfoil configuration. The airfoil used is GAW(2) section with a 30% chord Fowler flap. Measured in the experiments are the static pressure distributions over the main element and the flap at various incidences and flap positions. The lift curves have been computed by integrating these pressures. The results indicate that the flap effectiveness is reasonable at low flap deflections. At higher flap deflections, the flap effectiveness is very poor, due to either low Reynolds number at which the tests were conducted or due to non optimum flap slot geometry.